Remarks

The Examiner is thanked for a thorough search.

By this amendment, Claims 1, 6, 7, 12, 22, 25, 31, 76, 81, 82, 87, 95, 96, 98-100 and 105 have been amended. No claims have been added or cancelled. Hence, Claims 1-33 and 76-107 are pending in the application. The amendments to the claims as indicated herein do not add any new matter to this application.

Each pending claim is in condition for allowance over the cited art because one or more elements of each pending claim is not disclosed, taught, or suggested by the cited art.

Claims 1-3, 6, 9, 12-16, 21, 24, 25, 31-33, 76-78, 81, 84, 87-90, 95, 96 and 105-107 stand rejected under 35 U.S.C. §102(e), as being anticipated by U.S. Pat. No. 6,856,993 to Verma et al. (*"Verma"*). Claims 4, 5, 7, 8, 10, 11, 17-20, 22, 23, 26-30, 79, 80, 82, 83, 85, 86, 91-94, 96-98, and 100-104 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Verma* in view of U.S. Pat. No. 6,101, 508 to Wolff. (*"Wolff"*).

The rejections are herein respectfully traversed.

Overview of the Claimed Invention

As discussed in the Background of the subject application, synchronization operations often involve a significant amount of resource consumption. For example, when a synchronization application detects the addition of a new item to a copy of a file system, the contents of the new file must be transferred to the file system being synchronized during the synchronization process. (Specification, Page 2)

16   BEST AVAILABLE COPY

This is inefficient if a new item in the copy of the file system is merely a copy of an existing item, especially if the item is large. The entire item is transferred from a copy of a file system to the file systems being synchronized during the synchronization process, even though a copy of the item is already in the file systems being synchronized. Similarly, when an item in a copy of a file system is edited, it appears to the synchronization process that the original item was deleted and a new item added. Consequently, the original items may be deleted in all synchronized systems, and the new altered item added to all synchronized systems during the synchronization process. (Specification, Page 2)

In contrast, claimed embodiments of the invention incur less overhead than other synchronization processes by detecting one or more operations performed on a working version of a file system that is to be synchronized. Instead of transferring entire files from a working version to a file system during synchronization, claimed embodiments of the present invention update (synchronize) a file system by performing the operations that were detected on the working version of the file system on the file system being synchronized. (Specification, Page 3)

Independent claims 1 and 76 are directed to an embodiment that detects that an item in a working version of a file system has been moved. Independent claims 12 and 87 are directed to an embodiment that detects that a first item in the working version of a file system is a copy of a second item in the working version. Independent claims 25 and 99 are directed to an embodiment that detects if at least one operation (move or edit) has been performed on an item in the working version of the file system. Independent claims 31 and 105 are directed to an embodiment that detects that at least two successive

operations (move, copy or edit) have been performed on an item in the working version

of the file system.

> *Verma* does not teach or suggest any of these claims.

Rejection of Independent Claims 12 and 87, and dependent claims 13-24 and 88-98

Claim 12, representative of claim 87, recites:

recording information about a file system to a comparison file;
making a working version of a portion of the file system;
persistently maintaining the working version; and
using information in the comparison file and about the working version to
subsequently determine if a first working item in the working version was
once copied from a second working item in the working version.

Verma does not teach or suggest every limitation of Claim 12, as amended.

Comparison File

Claim 12 requires "recording information about a file system to a comparison

file." The Office Action asserts that Col. 9, lns 10-17 of *Verma* teach this first limitation.

(Office Action, page 5). However, the cited section of *Verma* only teaches that a "file

handle 90 returned in response to a successful create/open request 80 will include a

pointer to the transaction context 78." A file handler including a pointer is not a

comparison file. Claim 12 recites <u>recording</u> information about the file system to the

comparison file. The information recorded in the comparison file is then used to

determine if a first working item in the working version was once copied from a second

working item in the working version.

In addition, the Office Action specifically states: "file handler (i.e. comparison

item) for file system management operations)." (Office Action, Page 5). In the claimed

invention, information about the file system is recorded to a comparison *file,* not a file handler *item.*

Furthermore, the transactional context that the file handler in *Verma* points to does not teach a comparison file that records <u>information about a file system</u>. The transactional context of *Verma* is an object. (*Verma,* Col. 7, ln 8; Col. 7, ln31-32; Col. 7, ln 53). The transaction context object contains information regarding a particular <u>transaction</u> being performed on a file system. Information about the file system itself is not recorded to the transactional context, nor to the file pointer that points to the transactional context.

Making and Persistently Maintaining a Working Version

Furthermore, claim 12 recites: "making a working version of a portion of the file system" and "persistently maintaining the working version." The Office Action asserts that *Verma* teaches this limitation Col. 3, lns 13-19, stating: "isolation directory (i.e. working item) for file system information manipulation."

First, the claimed invention recites making a working *version,* not a working *item,* as stated in the Office Action at page 5. A working version is discussed on page 4 of the subject application, which states "[w]hen portions of the file system are downloaded by a client, the resulting local file system is referred to as a working version. The working version copies the items from the portion of the file system selected to be downloaded for the client."

The isolation directory of *Verma* does not teach any type of working version of a portion of a file system. The isolation directory is a temporary construct used to store transactional information prior to committing the transaction. Col. 3, lns 28-30 states:

19

"Isolation directory entries are removed from the isolation directories when the transaction commits or aborts."

Furthermore, *Verma* teaches away from the claimed invention at Col. 11, ln 67 – Col. 12, ln 13: "To accomplish transaction isolation ... a 'version' Vo of the file is kept for reader X ... the version seen by reader X is a per-page copy of the original data made before the changes are written ... as used herein, the terms 'version,' 'versioned' 'versioning' and the like refer to a point in time snapshot, (and should not be confused with persistent versioning such as in a source code control system)." (emphasis added). Hence, *Verma* specifically teaches that versions are not persistent.

In contrast, the working version of the claimed invention is not a point in time snapshot, and is not removed when a transaction or operation is performed on it. The working version in the claimed invention is persistently maintained so that operations performed on it can be detected by comparing the working version with the comparison file. The detected operations can then be performed on the file system to synchronize the file system with the changes made to the working version of the file system.

Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. § 102(e) for independent claims 12 and 87. Dependent claims 13-24 and 88-98 all include the limitations of independent claims 12 and 87, respectively, by virtue of their dependence. Therefore the dependent claims are patentable over the cited art for at least the reasons set forth herein.

Furthermore, the dependent claims 13-24 and 88-98 recite additional limitations that independently render them patentable over the cited art. In view of the patentability

of the independent claims 12 and 87, the dependent claims are not further argued in order

to expedite prosecution.

Rejection of Independent Claims 1, 25, 31, 76, 99 and 105, and dependent claims 2-

11, 26-30, 32-33, 77-86, 100-104 and 106-107

Independent claims 1, 25, 31, 76, 99 and 105 all recite four elements. The first

three elements in each of these claims are similar. Representative Claim 1 recites:

> recording information about a file system to a comparison file, the information
> identifying at least a first item in the file system located at a first location,
> the first location being identifiable by a first location information;
> making a working version of a portion of the file system, the working version
> including at least a first working item that corresponds to the first item, the
> first working item initially being located at a second location identifiable
> by the first location information;
> persistently maintaining the working version;

Verma does not teach or suggest these limitations of Claim 1, as amended.

Comparison File

Like claim 12, discussed above, *Verma* does not teach the feature of recording

information about a file system to a comparison file. The Office Action cites the same

section of *Verma* (Col. 9, lns 10-17) as teaching this first limitation of each independent

claim 1, 12, 25, 31, 76, 87, 99 and 105. The arguments presented above with respect to

claims 12 and 87 apply to this limitation of claims 1, 25, 31, 76, 87, 99 and 105.

Making and Persistently Maintaining a Working Version

Furthermore, claim 1 recites: "making a working version of a portion of the file

system, the working version including at least a first working item that corresponds to the

first item, the first working item initially being located at a second location identifiable

21

by the first location information" and "persistently maintaining the working version."

With respect to claims 1, 25, 31, 76, 99 and 105, the Office Action asserts that *Verma*

teaches this limitation at Col. 16, lns 39-44, stating: "1st and 2nd operational states (i.e.

working item states) for same file)." (Office Action, page 3, page 7, page 8).

First, the claimed invention recites making a working *version*, not working *item*

states. More significantly, the cited section of *Verma* only teaches that:

> FIG. 10 thus represents one read/write open by transaction t3 modifying the
> current version of the file, one read-only open by transaction t2 accessing the
> most recent committed version of the file, and another read-only open by
> transaction t1 access an earlier committed version.

Multiple point-in-time versions of a file do not teach or suggest making a working

version of a file system and persistently maintaining the working version. In fact, the

cited section of *Verma* teaches against persistently maintaining a working version, as

several temporary versions of individual files are made. These temporary point-in-time

versions of a file are only used in the context of a transaction, and are not persistently

maintained.

Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. §

102(e) for independent claims 1, 25, 31, 76, 99 and 105. Dependent claims 2-11, 26-30,

32-33, 77-86, 100-104 and 106-107 all include the limitations of independent claims 1,

25, 31, 76, 99 and 105, respectively, by virtue of their dependence. Therefore these

dependent claims are patentable over the cited art for at least the reasons set forth herein.

Furthermore, the dependent claims 2-11, 26-30, 32-33, 77-86, 100-104 and 106-

107 recite additional limitations that independently render them patentable over the cited

art. In view of the patentability of the independent claims 1, 25, 31, 76, 99 and 105, the

dependent claims are not further argued in order to expedite prosecution.

For the reasons set forth above, Applicant respectfully submits that all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all claims is hereby respectfully solicited.

CONCLUSION

The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

A petition for extension of time, to the extent necessary to make this reply timely filed, is hereby made. If applicable, a law firm check for the petition for extension of time fee and all applicable extra claim fees is enclosed herewith. If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP
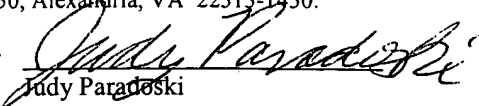
Dated: May 26, 2005

Lesley Coulson Boveri
Reg. No. 46,642

2055 Gateway Place, Suite 550
San Jose, CA 95110-1089
Telephone No.: (408) 414-1080
Facsimile No.: (408) 414-1076

CERTIFICATE OF MAILING
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

on ___May 26, 2005___ by _____
Judy Paradoski